



**Defense Information Systems Agency**

Department of Defense

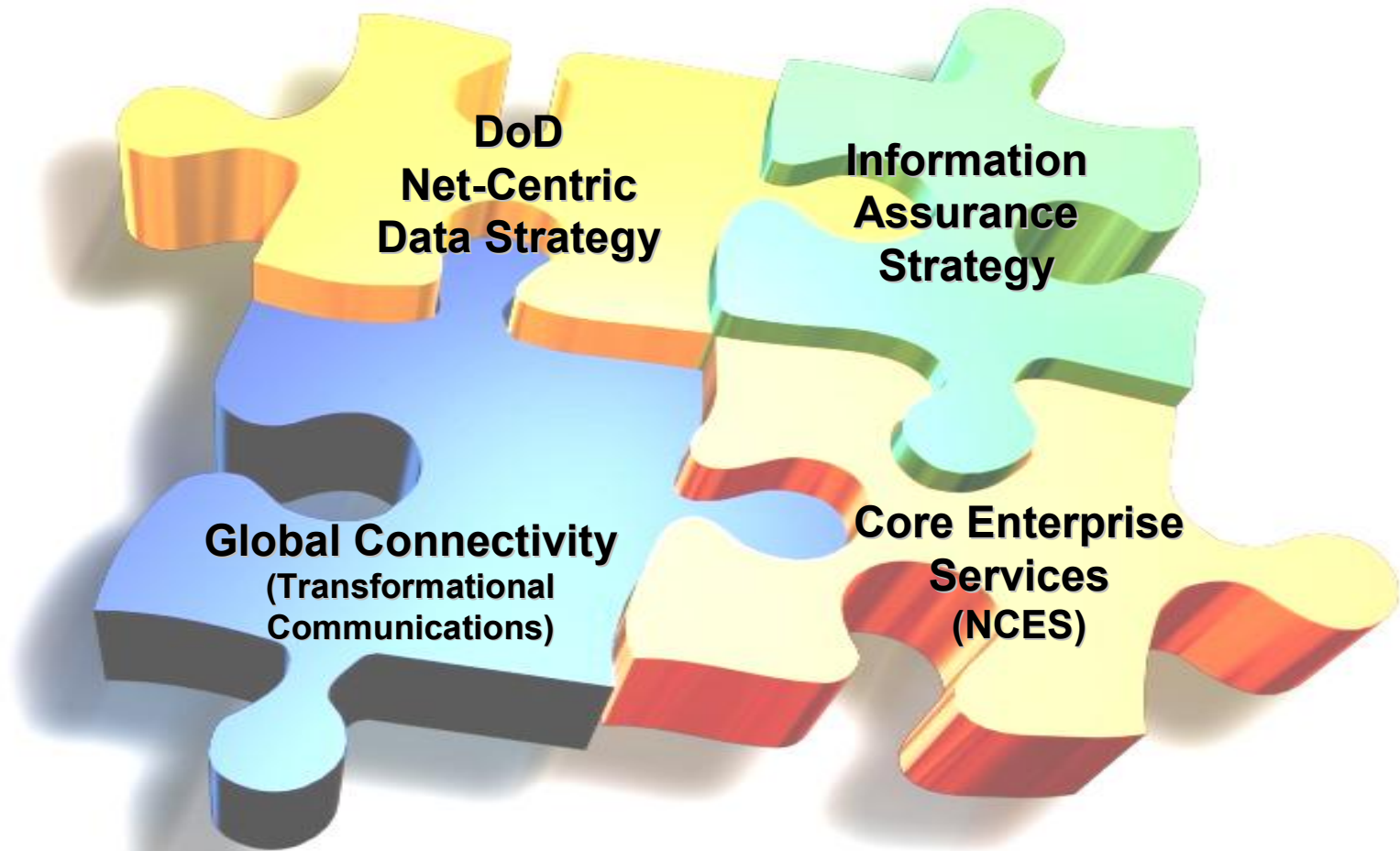
# **Net-Centric Enterprise Services (NCES)**

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**20 December 2006**

UNCLASSIFIED

# Tenets of Net-Centric Warfare



**Global connectivity, real-time collaboration, and rapid and continuous information exchange**

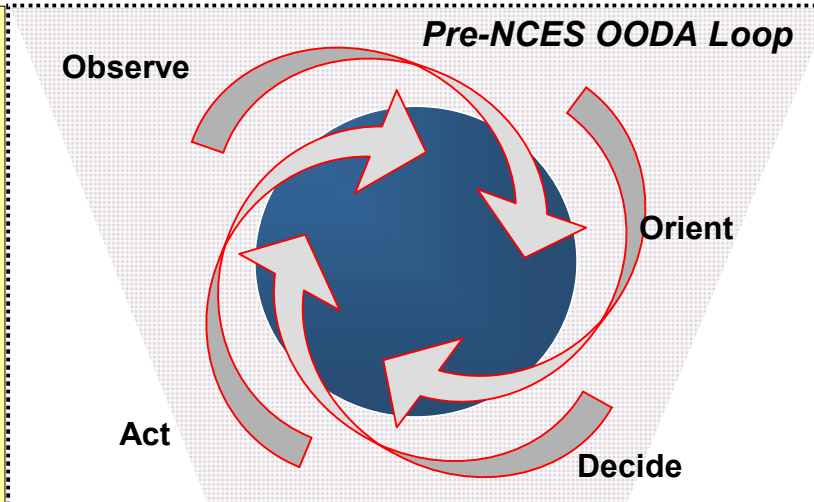
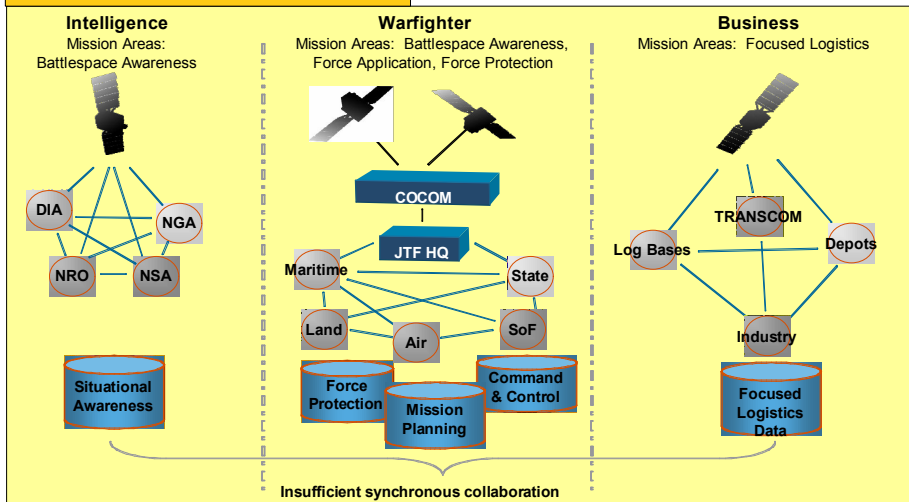
# What is NCES?

- **NCES enables information sharing by connecting people/systems who have information\* with people/systems who need information**
  - **For people who *have* information, NCES provides global information advertising and delivery services**
  - **For people who *need* information, NCES provides global services to find and receive information**

\* Information – data and services (web services)

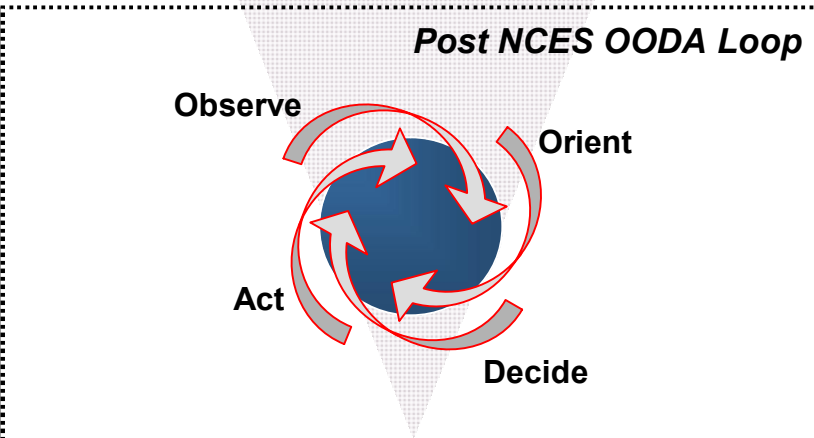
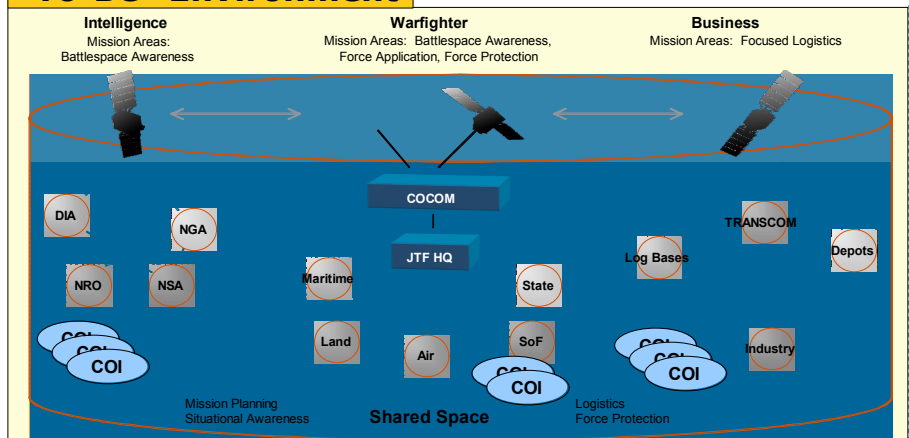
# Why NCES?

## "As-Is" Environment



**Stove-piped information = Large OODA Loop**

## "To-Be" Environment



**Shared, accessible information = Small OODA Loop**

**NCES creates a shared information space, increasing decision velocity**



# NCES Guiding Principles

- **Enable DoD Net-Centric Data Strategy**
- **Speed to deployment – risk management**
  - **Adopt** service specifications
  - **Buy** performance-based, managed services from service providers
  - **Create** absolutely minimize
- **Leverage existing assets to manage risk**
  - Use pilots, experiments, early adopters, proofs of concept to control risk
- **DISA partnership with the Services**
  - Capability to the Tactical Edge
  - Include C/S/A in selecting solutions
  - Participation in pilots, experiments, proofs of concept, early-user-testing
- **Easy, simple, fast governance**
  - Delegate fielding authority of independent capabilities to lowest level
  - Tailored acquisition processes
- **Business Strategy**
  - **Manage a portfolio of services**
  - **Use performance-based service level agreements (SLAs) for managed and adopted services**
  - Exploit competition for commercially available solutions
  - Hosting in GIG or commercial computing nodes as appropriate
  - Provide acquisition flexibility by limiting upfront investment
- **Technical Strategy**
  - Timely access to rapidly evolving technologies
  - **Define service interfaces to ensure open industry standards, loosely coupled services, and evolutionary plug and play architecture**
  - Document interface end-of-life strategy



# DoD Net-Centric Data Strategy Goals:

## Implement DoD Data Strategy per Directive 8320.2

### Visible

Is an information resource and associated POC discoverable by most users?

### Accessible

Is it connected to the network(s), and are tools readily available to use it?

### Understandable

Can it be intelligibly used? Are the semantics well documented?

### Trusted

Is the source, accuracy and currency of the resource available to users?

### Interoperable

Can it be easily combined or compared with other information or mediated?

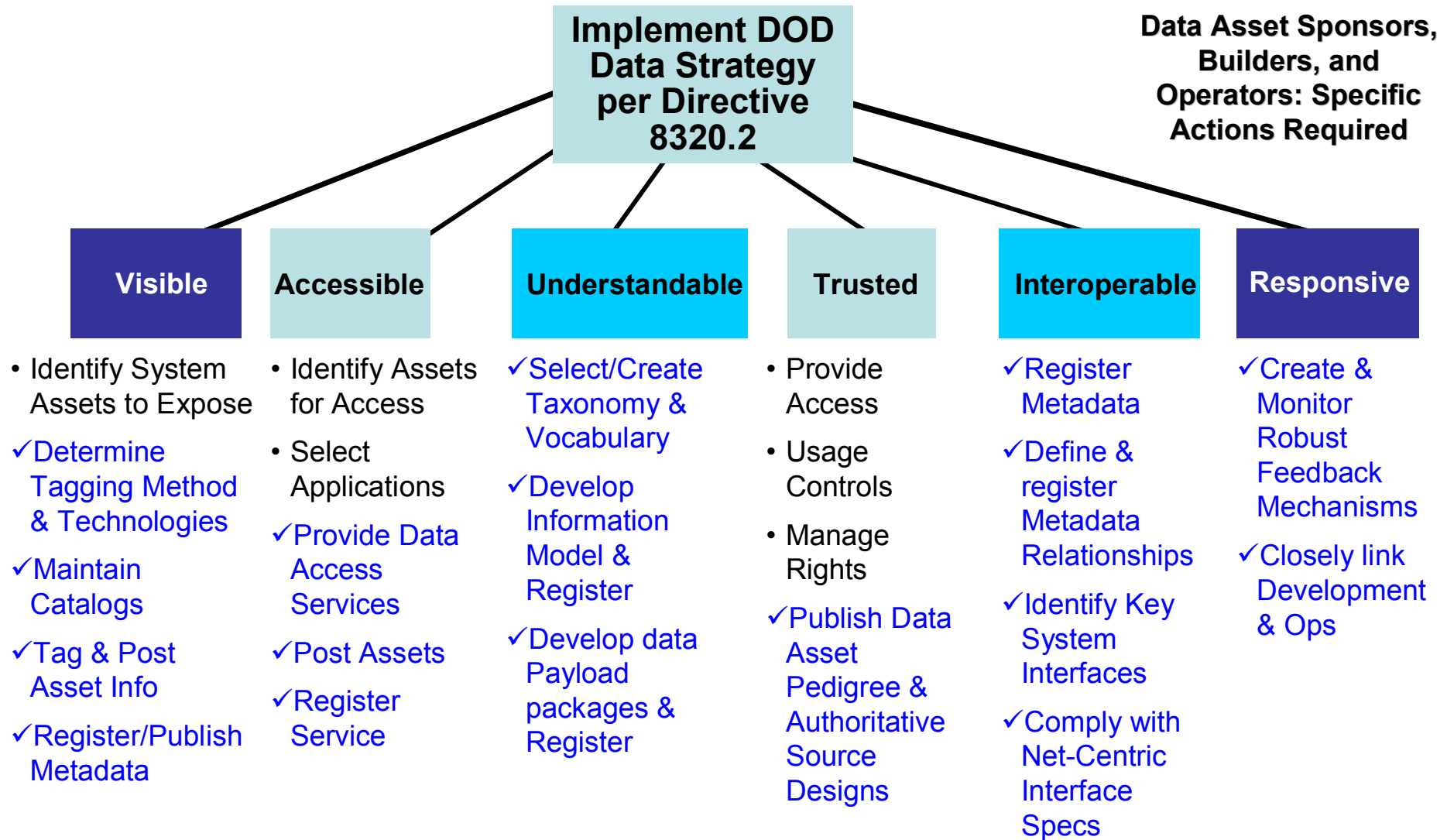
### Responsive

Is the resource answering user needs? Are robust, direct user feedback mechanisms in place to guide development?

**NCES enables the DoD Net-Centric Data Strategy**



# Data Strategy Goals & Actions Required



✓ *NCES enables via online services, interface specs and SDKs*

- **Adopt**
  - Proven specifications, best practices, and interface definitions
  - Existing Service Technologies
- **Buy**
  - New commercial managed services
  - Use performance-based acquisition
- **Create**
  - Creation of new services only if adopt/buy not feasible



# NCES Increment I Product Lines

User/Entity

Limited Tactical



Strategic/Operational



Allied/ Coalition  
& Multi-national  
(Limited)

**Business  
Mission Area**

**Warfighting  
Mission Area**

**DoD portion of  
the  
Intelligence  
Mission Area**

*Information Exchange*

**Core Enterprise Services**

**Enterprise  
Collaboration**

**Enterprise Portal**

**Content  
Discovery & Delivery**

**Service Oriented Architecture Foundation**

*The NCES Core Enterprise Services deliver the capabilities that support and enable the Business, Warfighting, and Intelligence Mission Areas to achieve network-centric operations.*



# Collaboration Product Line Capabilities

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- **Text Collaboration (Chat & IM):** Provides the ability for authorized users to initiate and participate in low bandwidth text chat sessions
- **Web Conferencing**
  - **Audio over IP:** Voice conferencing sessions (VOIP).
  - **Video over IP:** Video conferencing sessions.
  - **Whiteboarding & Annotation:** Ability to import and annotate diagrams, pictures, and other objects for viewing by other collaboration participants.
  - **Application Sharing/Broadcasting:** Ability for users to share and broadcast an application running on their computer as part of a collaboration session.
  - **Presence and Awareness:** Ability to identify users available for collaboration sessions.
  - **Non-DoD Participation:** May invite non-DoD personnel into collaboration sessions
- **Session Management:** Provides the management, customization, and control of collaboration sessions and workspaces whether ad hoc or persistent



# Collaboration Status

**Acquisition Goal:** Provide “2-button” collaboration solution to DoD enterprise via commercial managed service providers

- **First Button** – IBM Lotus Sametime
- **Early User Testing** on NIPRNet -- In Progress
- One year contract w/ two one year extensions
- Lessons learned from previous pilot & NCES CDD determined source selection criteria
- Second Button – Acquisition to follow
- SIPRNet – Early User Testing Feb - May 07



# Collaboration Info Page

<https://gesportal.dod.mil/sites/Collaboration/default.aspx>

[Home](#) [Documents and Lists](#) [Create](#) [Site Settings](#) [Help](#) [Tutorials](#) [MySite](#) Up to GES Portal

[Home](#)

Documents

Pictures

Lists

Discussions

Surveys

Register

DoD Collaboration

Home

Welcome to the home for DoD Collaboration!

You may now register for access to the collaboration service by clicking the Register button. Accounts are now being provisioned on a limited basis. When your account is created, you will receive login instructions via email. Please continue to check this site for additional information and updates relating to NCES Collaboration.

Announcements (Last 14 Days)

Title	Modified
Account Distribution Has Commenced (Limited Basis) <span>NEW</span>	8/10/2006 5:25 PM
Over 500 Registration Requests	8/8/2006 4:53 PM
Register Now!	8/4/2006 1:58 PM
Projected Service Availability Date	7/28/2006 3:38 PM
ActiveX Requirement Removed	7/28/2006 10:11 AM

FAQs

Question

My local DAA has not approved this service. Can I use it anyway?

How will EUT users be trained in preparation of Operational Testing (OT)? How will users be trained when the service is fully operational?

When will information be made available to local DAAs so that they can grant ATOs and prepare their networks? How will this information be distributed?

When will the service be available?

I have heard that the service is being limited to 3,000 users. Can you explain that limit?

I want to sign up for an account. How can I do that?

Can individuals on the Internet (i.e., not part of DoD) use the service?

I had heard that there were going to be two service providers, but it sounds like there is only one. What happened?

How can I change my email address on the Defense Online Portal?

How can I receive automated announcement updates?

Click below to send an email:

Technical Support

NCES Collaboration PMO

Links

[NCES Collaboration Discussion Forum](#)

[IBM Sametime Home Page](#)

[Sametime Training Links](#)

[NCES Collaboration Related Documents](#)

POCs

Title	Name
Lt Col	Dian Hall
MAJ	Karl Kurz
Maj	Vonda McLean
LT	Giancarlo Rossi
Mr.	Farooq Mohammed
Mr.	Prince Billups
Mr.	Kevin Heald
Mr.	Benjamin Brandt



# NCES Collaboration Service Home Page

Browser address bar: <https://www.e-collabcenter.com/wp>

## E-CollabCenter

Log out

FOUO


My Favorites

- Home
- Instant Messaging
- Web Conferencing
- Chat Rooms
- Organizations
- My Profile
- Support

### Instant Messaging

The instant messaging page is used to chat with other users. On this page you can:


- Open a text chat
- Manage your contact list
- Manage your online status
- Search for users in the directory
- Find transcripts of past chats



### Web Conferencing

The web conferencing page is used to participate in meetings with other users. Web conferences include text chat, shared whiteboard, application sharing, audio and video. On the web conferencing page a user can:


- NEW** Training Schedules
- Find and attend a web conference
- Schedule a web conference



### Chat Rooms

The chat rooms page is used to participate in persistent sessions for team collaboration over days, weeks, or more. Chat rooms include persistent text chat, files, notes and bookmarks. On the chat room page a user can:


- Enter or create a chat room



### Additional Tools

The following tools are also provided to aid the user in having a productive collaboration experience:

- Find a participating Organization in the Organizations list
- Update your profile and password in My Profile
- "How do I" documentation for common tasks
- Step by step Tutorial Guides for major activities
- Downloads to provide additional workstations support
- Frequently Asked Questions



### Active Meetings

Click on a meeting name to attend a meeting, or click [here to create a meeting](#)

Day	Time	Meeting	Moderator
09/12	08:15	<a href="#">CENTCOM - Doug Moore</a>	DOUGLAS MOOR
09/13	10:30	<a href="#">JEFX08 IM IPT</a>	ELAINE LAMASTE
09/26	13:30	<a href="#">DT Meeting 1</a>	Dave Dubose
09/26	13:30	<a href="#">DT Meeting 2</a>	Dave Dubose
09/26	13:30	<a href="#">DT Meeting 3</a>	Dave Dubose
09/26	13:30	<a href="#">DT Meeting 4</a>	Dave Dubose
09/26	13:30	<a href="#">DT Meeting 5</a>	Dave Dubose
09/26	13:30	<a href="#">DT Meeting 6</a>	Dave Dubose
09/26	13:30	<a href="#">DT Meeting 7</a>	Dave Dubose
09/26	13:30	<a href="#">DT Meeting 8</a>	Dave Dubose

### Chat Rooms

Select Sessions to join (use ctrl-click to select multiple):

- SERVICE UPDATES
- 46TS / OGEJ
- 505 CCW/CC/CV & GP/CC/CD ROOM
- 505 CCW/EUT GP A
- 505 CCW/EUT GP B
- 505 EXS/CSS
- 505 EXS/DOI
- 505 EXS/DOX
- 59th Signal BN
- 605TH TES
- 653d ELSG/KI
- ACC/A6 Communications Directorate
- AETC/A6 Communications Directorate



# Content Discovery & Delivery (CD&D) Capabilities

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- **Federated Search:** Provides services to find and aggregate information across GIG enterprise data sources.
- **Enterprise Catalog:** Provides services to store and retrieve metadata published from GIG enterprise data sources.
- **Enterprise Content Delivery Network:** Provides services to store, cache, and forward-stage information for fast access.



# Service Oriented Architecture (SOA) Foundation Capabilities

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- **Service Security:** Provides services to create, manage and enforce access control policies for GIG enterprise services.
- **Enterprise Service Management:** Provides services to monitor and manage GIG enterprise services. Provides reporting of SLA/QoS information to GIG enterprise service consumers.
- **Service Discovery:** Provides services to publish and find GIG enterprise services registered and categorized in an enterprise registry.
- **Machine-to-Machine Messaging:** Provides services to support reliable information exchange at the machine level.
- **Mediation:** Provides services to support translation between different message formats. Supports the creation and implementation of process workflows across the enterprise.
- **Metadata Registry:** Provides ability for Enterprise systems to discover & manage various metadata artifacts. Promotes data visibility and reusability. Repository for metadata.



# DoD Metadata Registry (MDR) and Clearing House

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- **“One Stop” Publish, Subscribe and Manage capabilities for Reusable *Structural* Metadata Components**
  - 186K XML items (schemas, stylesheets, etc) registered as of 11/06
  - Includes translation logic for mediation & taxonomies
  - 7600 Registered Users from DoD, IC, DHS, NASA and more
  - Unclassified, Secret and Top Secret instances operating
- **Run Time Support Available**
  - Web Services
  - ebXML Registry capabilities
- **User feedback driven**
  - Online user-to-developer
  - DoD Metadata Working Group
  - Version 5.2 now available



# DoD Metadata Registry (MDR) and Clearing House

<http://metadata.dod.mil>

The screenshot shows the DoD Metadata Registry and Clearinghouse website. The browser address bar displays <https://metadata.dod.mil/mdrPortal/>. The page header includes the DoD METADATA REGISTRY AND CLEARINGHOUSE logo, version 5.2, and a login status message: "You are not currently logged in to the Metadata Registry Portal." with a LOGIN button. The navigation bar contains links for Main, XML, Taxonomy, Reference Data Set, Data Element, and Other. Below the navigation bar, there are links for Home, Search, Subscriptions, Briefcase, Relationships, Ratings, and Help.

**What's New**

**Metadata Registry Version 5.2**  
Version 5.2 of the Metadata Registry includes a number of updates/fixes and some new features. The following are a few of the highlights included in v5.2:

- New for Namespace Managers/Administrators**
  - Namespace Admin Dashboard added
  - Updated Administrator's Manual (see Briefings and Docs)
- v5.2 Updates/Fixes**
  - Manifest Generator Tool
    - Updated Manifest Generator display messages
    - Manifest Generator form update
    - Additional support for errors encountered with the manifest generation process
  - DDMS content updated
  - General performance enhancements
  - Condensed stylesheets and javascript files
  - Updated User's Manual (see Briefings and Docs)

**Metadata Registry Version 5.0**  
Version 5.0 of the Metadata Registry includes several new features.

**Welcome to the DoD Metadata Registry and Clearinghouse!**

The DoD Metadata Registry and Clearinghouse provides software developers access to data technologies to support DoD mission applications. Through the Metadata Registry and Clearinghouse, software developers can access registered XML data and metadata components, COE database segments, and reference data tables and related metadata information such as country

**Notifications**

**Please review the proposed GUI upgrade -**  
<http://mdrbeta.fgm.com/newMDR>  
Feedback on the proposed changes is appreciated and can be sent via the feedback and comments link on the bottom of each page.

**DoD Metadata WG**  
The materials from the 2006-10-18 DoD Metadata WG Mtg (zip file)

**NCES Metadata Initiatives**

[DDMS](#)

[Visibility Guidance](#)

**Training**

There are no open courses at this time.  
[View all upcoming courses](#)

**Briefings and Documentation**

**PDM III - Implementing the Net-Centric Data Strategy Progress and Compliance Report**  
This report is a broad area review of the Department's implementation of the DoD Net-Centric Data Strategy as mandated in DoD Directive (DoDD) 8320.2 (December 2004). The findings and recommendations are based on input from a cross-section of the Department's organizational entities that are collectively responsible for ensuring implementation of net-centric data sharing across the Department. The detailed approach and supporting data for this report are provided in Appendix A. [\[download\]](#)

**2006-10-18 DoD MWG Mtg Materials**  
This zip contains the briefings from the 2006-10-18 Meeting. [\[download\]](#)

**PEO-GES Data Services Office**  
PEO-GES Data Services Office TheDISA Program Executive Office, GIG Enterprise Services (PEO-GES) has announced the creation of the Data Services Office (NE\_C), headed by Ken Fagan. The attached slide lists the task, products, services, and customers. [\[download\]](#)

**MDR Usage Summary**



# CD&D and SOA Foundation Status

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- **Content Discovery and Delivery (CD&D)**: Existing Content Staging Program (deployed worldwide) transitioning to CD&D
  - Google Pilot providing Content Discovery
  - Akamai Pilot providing Content Delivery
  - Planned managed services buy after Milestone B
- **SOA Foundation (SOAF)**: Early Capabilities Baseline (ECB) established at DECC-Columbus, Ohio in September 2005
  - Available on NIPRnet and SIPRNet
  - Provides reference implementation for other DoD programs to learn along with DISA/NCES prior to future acquisition via service provider(s)
  - Planned managed services buy after Milestone B
  - Released 'Recommended Standards for Implementation of GIG Enterprise Services' on 12 June 2006
    - Defines current commercial standards for use including: Web Services, Mediation formats, Service Registry, Security, Messaging, etc.



# **Acquiring Managed Services for CD&D / SOAF**

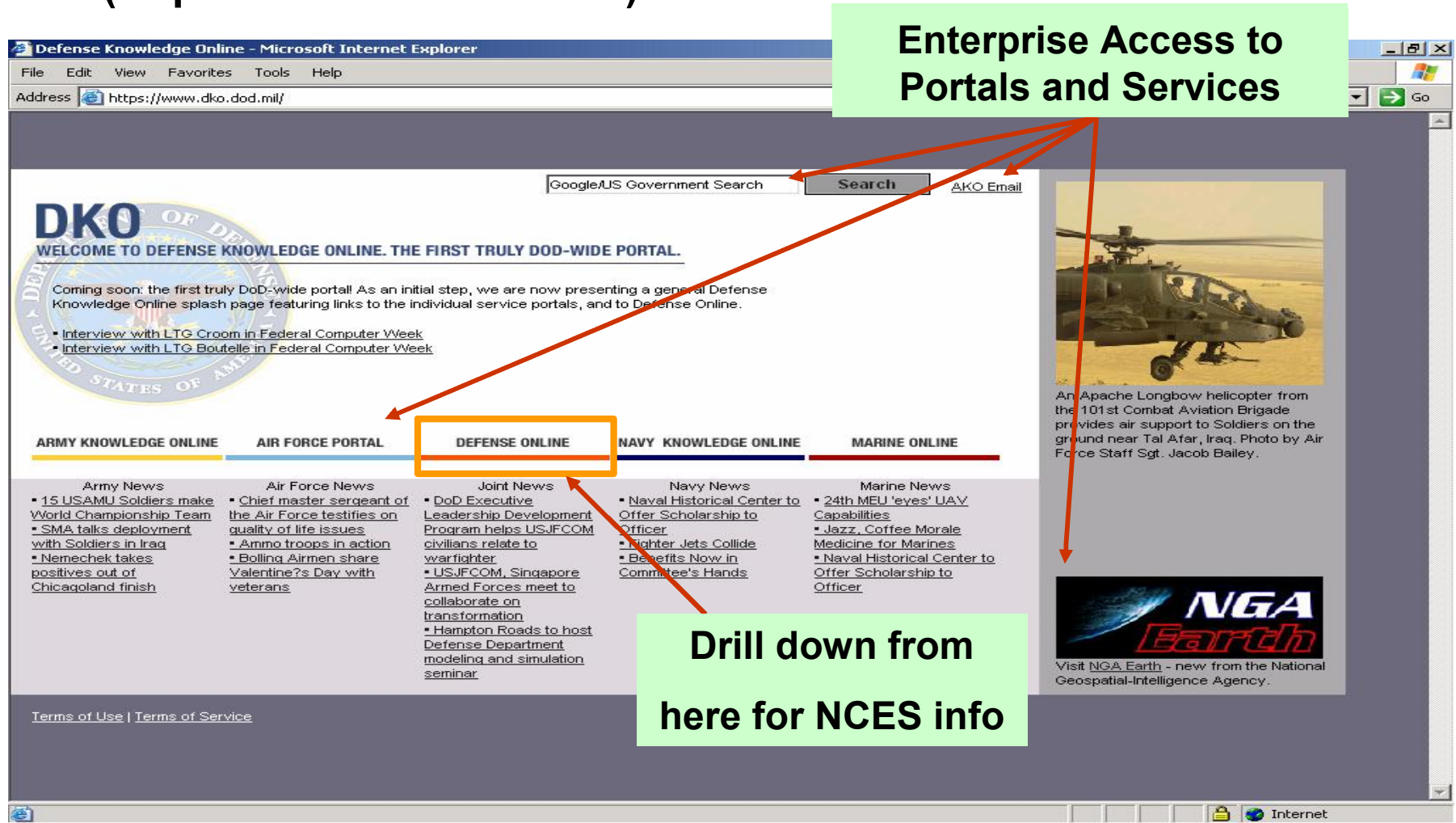
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- **NCES Industry Day held 10 Mar 06 to provide overview of NCES requirements for CD&D and SOAF managed services**
  - **Informed Industry of our NCES vision and requirements**
  - **Began a constructive dialog with industry to ensure that the goals of this acquisition are clearly understood and achievable**
  - **Solicited industry inputs on issues and contracting strategy to make this a successful effort**
- **SOA Foundation and Content Discovery & Delivery Way Ahead**
  - **Evaluate Government Managed Service candidates for adoption**
  - **Release RFPs for Commercial Managed Service providers**
  - **Develop SLAs and/or award Performance Based Contracts for managed services**
- **Draft RFP with Statement of Objectives for Industry Comment – target Jan 2007 – Post Milestone B**
- **Contract Awards in 4th Quarter Fiscal Year 2007**

- **Content Discovery User Interface:** Enables GIG users to find and retrieve data from GIG enterprise data sources.
- **Collaboration User Interface:** Enables GIG users to access collaborative capabilities including document sharing, text chat, and workgroups.
- **User Profiling and Customization Interfaces:** Provides GIG users the ability to customize and configure portal presentation settings based upon their preferences.

# DKO Splash Page / Status

- Adopt AKO and Converge to Defense Knowledge Online (DKO)
- (<https://www.dko.dod.mil/>)



**Defense Knowledge Online - Microsoft Internet Explorer**

File Edit View Favorites Tools Help

Address <https://www.dko.dod.mil/>

Google/US Government Search   [AKO Email](#)

**DKO**  
WELCOME TO DEFENSE KNOWLEDGE ONLINE. THE FIRST TRULY DOD-WIDE PORTAL.

Coming soon: the first truly DoD-wide portal. As an initial step, we are now presenting a general Defense Knowledge Online splash page featuring links to the individual service portals, and to Defense Online.

- [Interview with LTG Croom in Federal Computer Week](#)
- [Interview with LTG Boutelle in Federal Computer Week](#)

ARMY KNOWLEDGE ONLINE	AIR FORCE PORTAL	DEFENSE ONLINE	NAVY KNOWLEDGE ONLINE	MARINE ONLINE
<b>Army News</b> <ul style="list-style-type: none"> <li>• 15 USAMU Soldiers make World Championship Team</li> <li>• SMA talks deployment with Soldiers in Iraq</li> <li>• Nemechek takes positives out of Chicagoland finish</li> </ul>	<b>Air Force News</b> <ul style="list-style-type: none"> <li>• Chief master sergeant of the Air Force testifies on quality of life issues</li> <li>• Ammo troops in action</li> <li>• Bolling Airmen share Valentine's Day with veterans</li> </ul>	<b>Joint News</b> <ul style="list-style-type: none"> <li>• DoD Executive Leadership Development Program helps USJFCOM civilians relate to warfighter</li> <li>• USJFCOM, Singapore Armed Forces meet to collaborate on transformation</li> <li>• Hampton Roads to host Defense Department modeling and simulation seminar</li> </ul>	<b>Navy News</b> <ul style="list-style-type: none"> <li>• Naval Historical Center to Offer Scholarship to Officer</li> <li>• Fighter Jets Collide</li> <li>• Benefits Now in Committee's Hands</li> </ul>	<b>Marine News</b> <ul style="list-style-type: none"> <li>• 24th MEU 'eyes' UAV Capabilities</li> <li>• Jazz, Coffee Morale</li> <li>• Medicine for Marines</li> <li>• Naval Historical Center to Offer Scholarship to Officer</li> </ul>

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**Enterprise Access to Portals and Services**

**Drill down from here for NCES info**

An Apache Longbow helicopter from the 101st Combat Aviation Brigade provides air support to Soldiers on the ground near Tal Afar, Iraq. Photo by Air Force Staff Sgt. Jacob Bailey.

**NGA Earth**  
Visit NGA Earth - new from the National Geospatial-Intelligence Agency.

## Defense Online

### Portal to the Global Information Grid



### What is Defense Online?

Defense Online is the service gateway to access the Global Information Grid. This portal provides a framework for the DoD user to:

- ◆ Access tools developed to boost productivity
- ◆ Publish content and build custom work flow
- ◆ Incorporate NCES Pilot Services into business processes

[Access GIG Services](#)  
[About Defense Online](#)  
[Why Register?](#)  
[Defense Online Registration](#)  
[Contact Us](#)  
[Site Map](#)  
[NCES Home](#)  
[Home](#)

Powered by

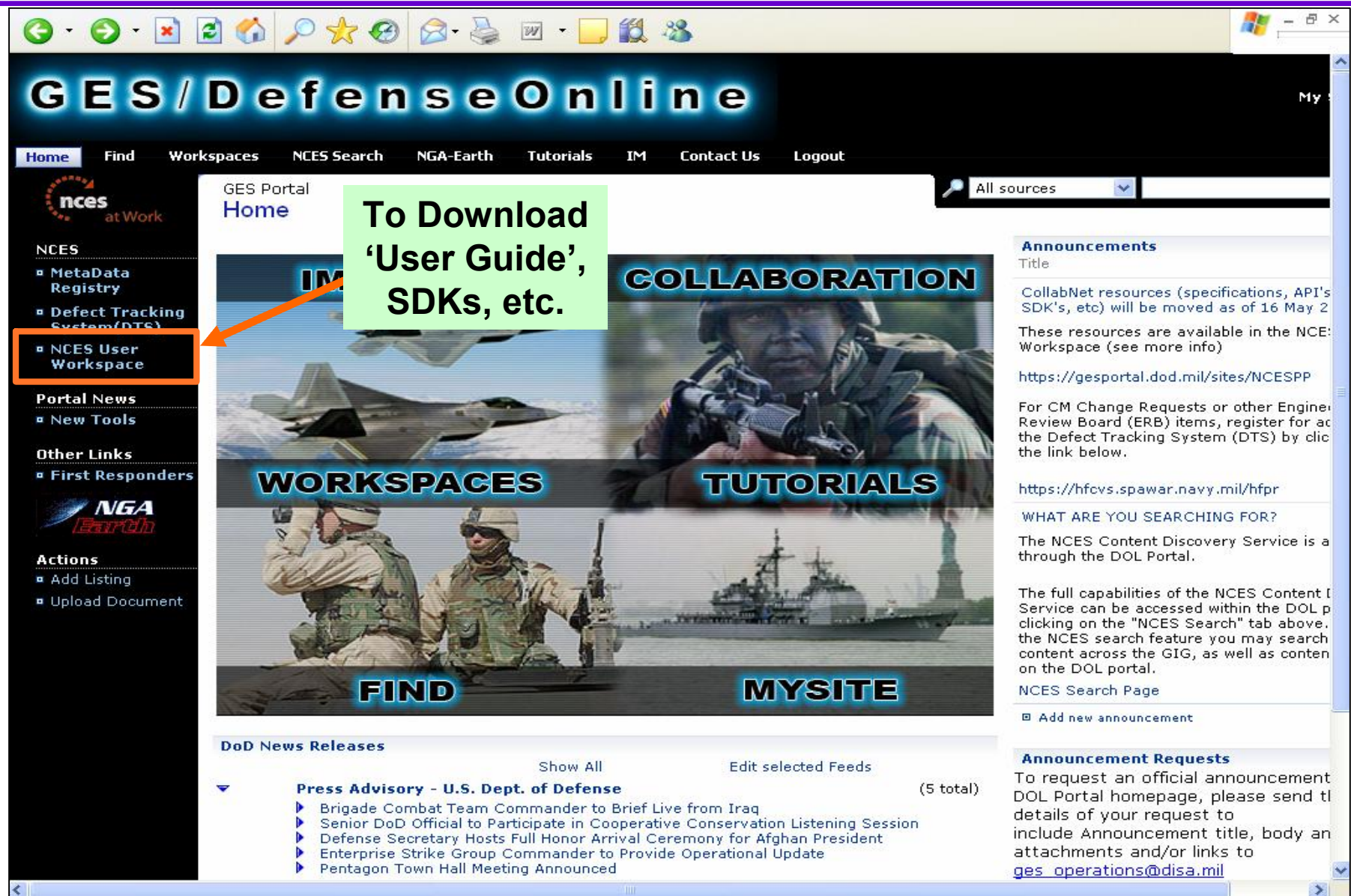


Brought to you by



Security, Privacy & Accessibility Notice | FOIA  
 Page Last Updated: 15 December, 2005  
[nces@cols.disa.mil](mailto:nces@cols.disa.mil)

# Early User Environment – To Begin Participating



**GES/DefenseOnline**

Home Find Workspaces NCES Search NGA-Earth Tutorials IM Contact Us Logout

GES Portal Home

**NCES at Work**

- NCES
  - Metadata Registry
  - Defect Tracking System (DTS)
  - NCES User Workspace**
- Portal News
  - New Tools
- Other Links
  - First Responders
- NGA Earth
- Actions
  - Add Listing
  - Upload Document

**COLLABORATION**

**WORKSPACES**

**TUTORIALS**

**FIND**

**MYSITE**

**Announcements**

Title

CollabNet resources (specifications, API's, SDK's, etc) will be moved as of 16 May 2006. These resources are available in the NCES Workspace (see more info)

<https://gesportal.dod.mil/sites/NCESPP>

For CM Change Requests or other Engineering Review Board (ERB) items, register for access to the Defect Tracking System (DTS) by clicking the link below.

<https://hfcvs.spawar.navy.mil/hfpr>

**WHAT ARE YOU SEARCHING FOR?**

The NCES Content Discovery Service is accessible through the DOL Portal.

The full capabilities of the NCES Content Discovery Service can be accessed within the DOL Portal by clicking on the "NCES Search" tab above. The NCES search feature you may search content across the GIG, as well as content on the DOL portal.

[NCES Search Page](#)

☐ Add new announcement

**Announcement Requests**

To request an official announcement on the DOL Portal homepage, please send the details of your request to [ges\\_operations@disa.mil](mailto:ges_operations@disa.mil) to include Announcement title, body and attachments and/or links to

**DoD News Releases**

Show All Edit selected Feeds (5 total)

**Press Advisory - U.S. Dept. of Defense**

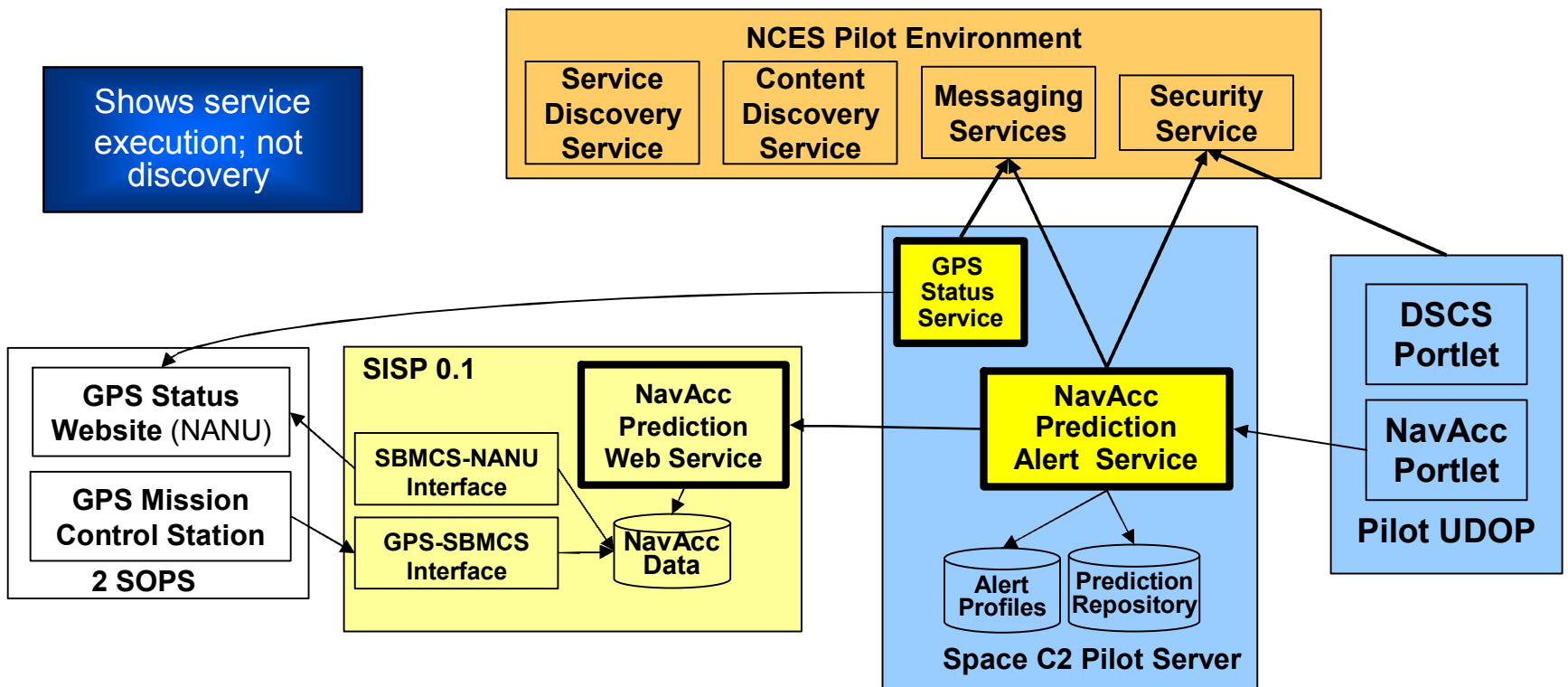
- Brigade Combat Team Commander to Brief Live from Iraq
- Senior DoD Official to Participate in Cooperative Conservation Listening Session
- Defense Secretary Hosts Full Honor Arrival Ceremony for Afghan President
- Enterprise Strike Group Commander to Provide Operational Update
- Pentagon Town Hall Meeting Announced





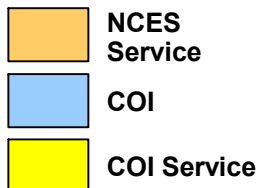
# C2 SSA COI Pilot GPS Thread

## Provide Navigational Accuracy Prediction Alert Service



### GPS Thread Advantages

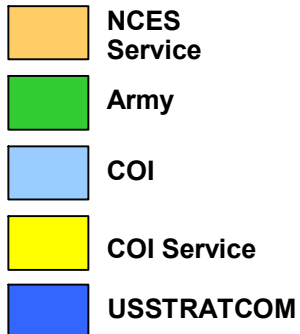
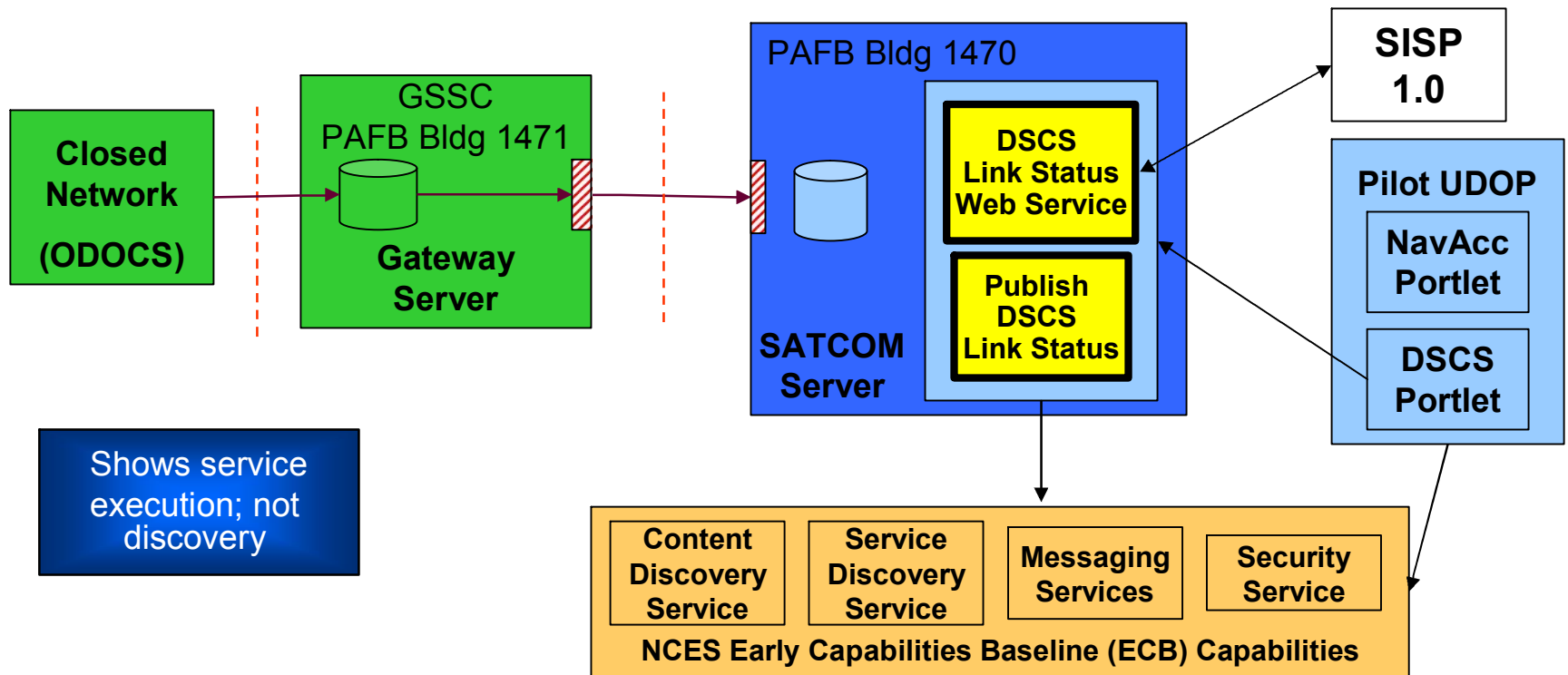
- Strong user advocacy for capability (14<sup>th</sup> AF)
- Provides risk reduction on use of NCES Core Enterprise Services
- Demonstrates value of leveraging existing services to create needed mission capability
- Risk reduction for Program of Record as a Service Provider





# C2 SSA COI Pilot DSCS Thread

Provide Machine-to-machine exchange of DSCS link status data

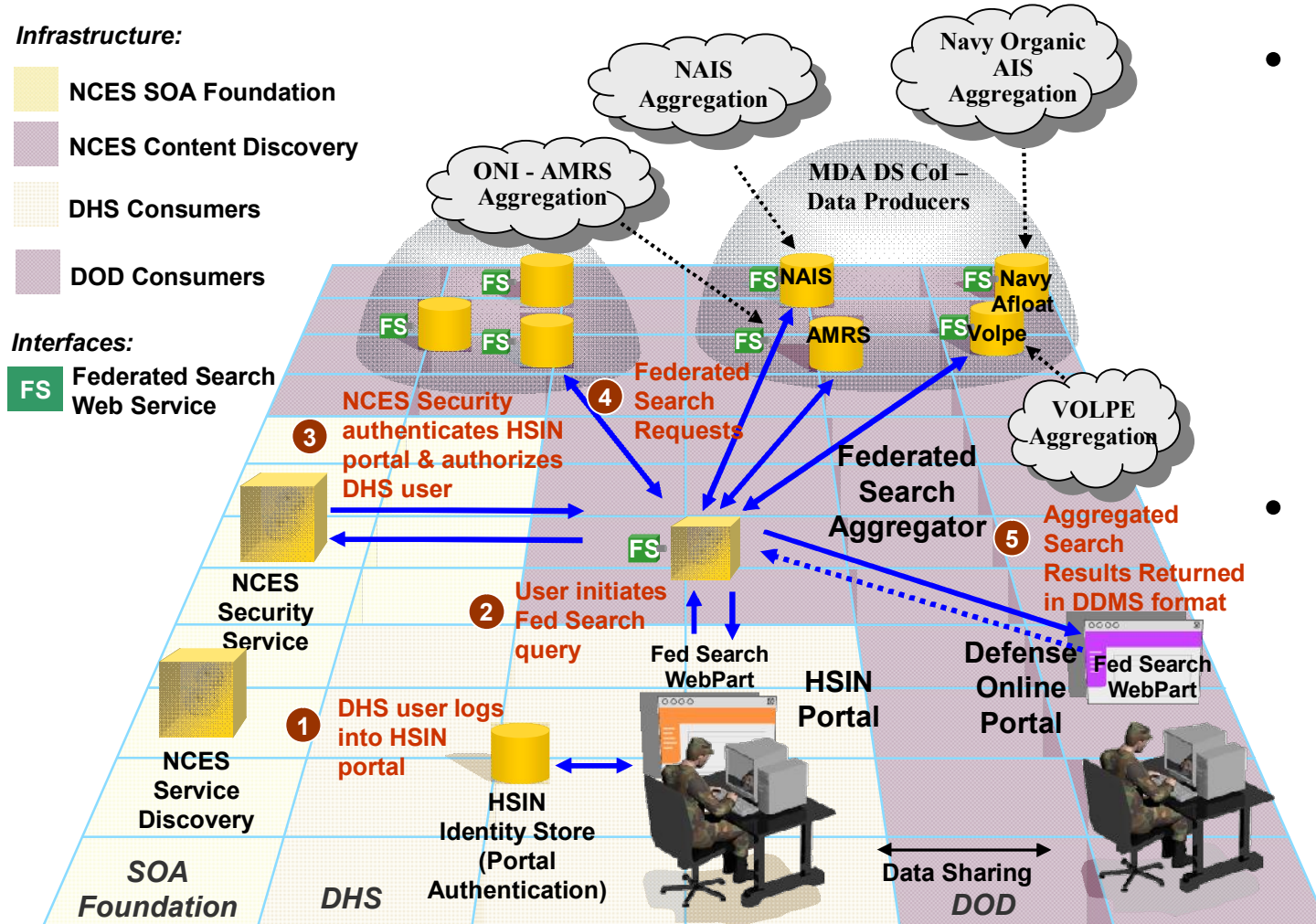


## DSCS Thread Advantages

- Exposes DSCS link status from authoritative source in accordance with DoD Data Strategy
- Provides risk reduction on use of NCES Core Enterprise Services
- Cross-service initiative



# MDA DS COI High-Level Pilot Architecture -- Discovery



- NCES CD&D ties disparate DoD and DHS data sources together
- NCES SOA Foundation facilitates and protects information exchanges

**MDA COI is using CD&D and SOA Foundation to enable information sharing**



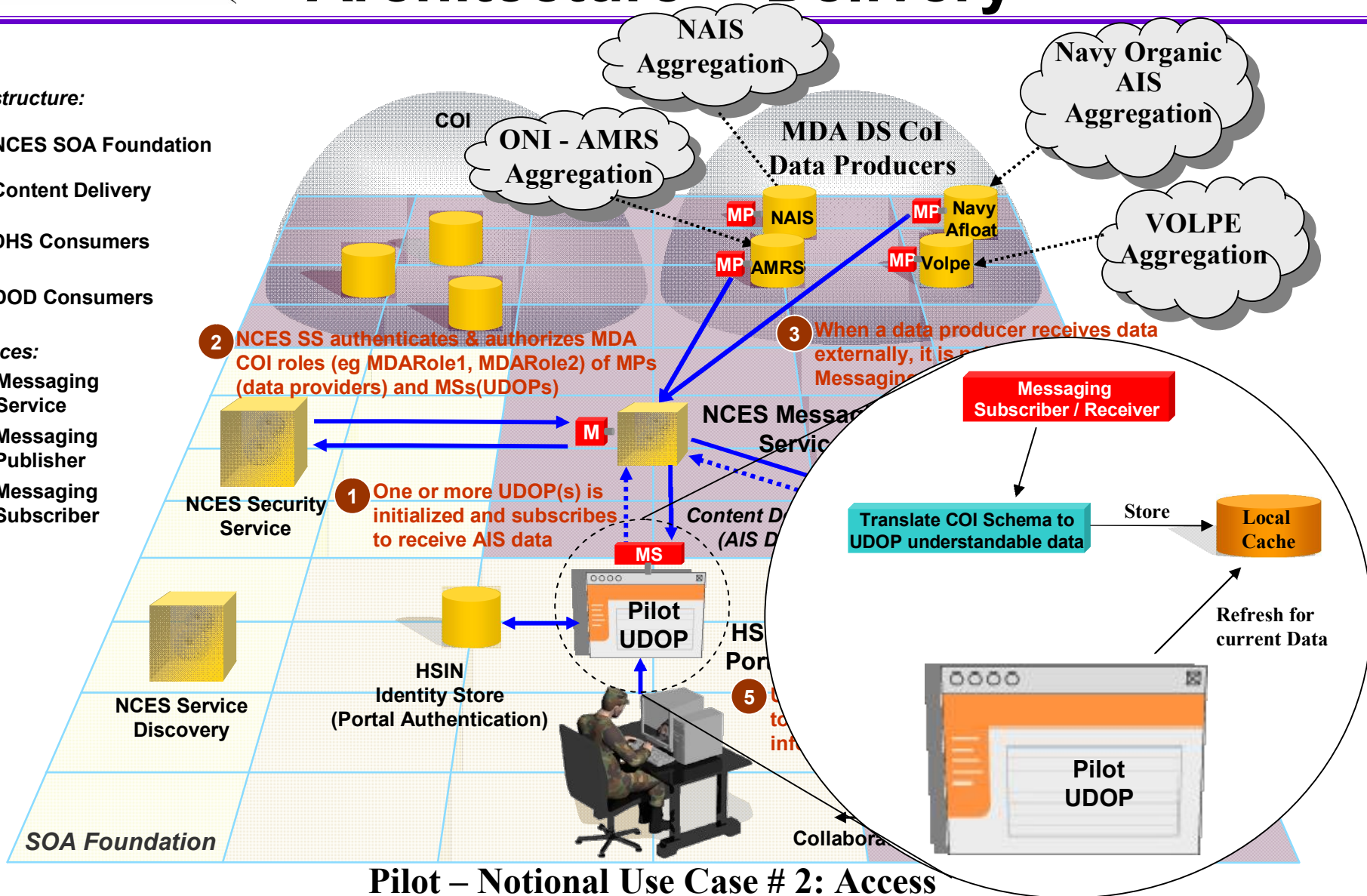
# MDA DS COI High-Level Pilot Architecture -- Delivery

## Infrastructure:

- NCES SOA Foundation
- Content Delivery
- DHS Consumers
- DOD Consumers

## Interfaces:

- M** Messaging Service
- MP** Messaging Publisher
- MS** Messaging Subscriber



Pilot – Notional Use Case # 2: Access  
Access of AIS Data, display in Pilot UDOP

# Summary

- **NCES is essential to the Department's ability to implement a network-based information environment that will meet the requirement for information superiority and decision superiority**
- **NCES will provide the core common utility services that Community of Interest capabilities developers will use in the development of mission applications**
- **NCES is soliciting feedback on current capabilities in order to refine capabilities for Increments I and II.**

***NCES is the foundation for improved knowledge sharing and future knowledge creation***



# Point of Contact

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**1. View on Internet:**

**<https://www.dko.dod.mil/>**

**2. Write:**

**[NCES@csd.disa.mil](mailto:NCES@csd.disa.mil)**

**3. Point of Contact:**

**Dana Swedish (NE\_A)  
703-882-1781**

**[dana.swedish@disa.mil](mailto:dana.swedish@disa.mil)**



[www.disa.mil](http://www.disa.mil)

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